2010 Forest Appreciation Week

Writing Contest

"Why Plant Trees?"

Top three statewide students, parents and teachers will be honored at a special celebration in our State Capitol.

Words of the statewide winners and nine semi-finalists will be featured in the 2011 Arbor Day-Earth Day Calendar.

Teachers of the three state writing contest winners receive FREE LEAF & Project Learning Tree (PLT) workshops.

100 participating teachers will win a free copy of *If Trees Could Talk, Stories About Wisconsin Trees* by R. Bruce Allison

Supplemental Activities inside! ➜

Brought to you by the Wisconsin Department of Natural Resources - Division of Forestry

January 19, 2010

Dear 4th Grade Teachers and Friends,

Once again, we invite you and your 4th Grade students to participate in the 21st Annual Forest Appreciation Week Writing Contest! By combining creativity with pencil, paper and computer, one of your students has a chance to win savings bond prizes, a landscape tree for their community or school grounds, share their words world-wide, be part of this year's BIG Tree planting in Capitol Park and be recognized at a special Arbor Day celebration in our State Capitol…if they enter the 2010 4th Grade Writing Contest! Awards, prizes and ceremony are sponsored by the Wisconsin Woodland Owners Association, the Wisconsin Nursery Association, the LEAF Program, the Project Learning Tree (PLT) Program and the Department of Natural Resources' Forestry Division.

Teachers can win too! The first 100 teachers that enter this year's contest will receive a copy of R. Bruce Allison's book, "If Trees Could Talk, Stories About Wisconsin Trees." Fascinating stories introduce readers aged 7-12 to noteworthy trees, both past and present, across Wisconsin. Told in compelling narrative style and supplemented with historic photographs and illustrations, this book carries an environmental message encouraging children to appreciate and manage natural resources wisely and respectfully. In addition, the teachers of the three state winners will receive scholarships for both a LEAF and PLT teacher workshop.

This year's theme, "Why Plant Trees?" asks students to write about the importance of tree planting in our communities. Planting trees enhances natural beauty, provides wildlife habitat, prevents soil erosion, improves air quality, provides shade, conserves valuable energy and much more. Students are encouraged to write about a personal experience with tree planting or the general importance of a properly planted tree. For inspiration, check out the activities and educational resources provided in this contest packet.

Contest requirements can be found on page 3. Additional copies of the contest packet can be downloaded from the EEK! (Environmental Education for Kids) website at www.dnr.wi.gov/eek in the 'Teacher Pages", or search the Department's home page at www.dnr.wi.gov. Use the key words "Arbor Day Contests". Bookmark the websites, because in April the writings of the three state winners and nine semi-finalists will be posted for world-wide viewing.

Join in the celebration of Arbor Day (April 30), one of Wisconsin's public school year observance days, by encouraging your students to enter this year's writing contest and plant trees. Good luck!

Sincerely,

Genny Fannucchi
Forest Resource Education and Awareness Specialist

Tessa Jilot
Forestry Educator
Division of Forestry

2010 Forest Appreciation Week Writing Contest

Contents

Contest Requirements:

- Fourth Grade Students Only
- Submit only one (1) entry per classroom
- Any written form, including essay, poetry or other type of creative writing is acceptable. The entry must be 200 words or less and follow the theme: ***Why Plant Trees?***
- Writing must be the original work of a student currently in fourth grade.
- A participation report form must be attached to your classroom entry. Your classroom entry must be sent to the writing contest coordinator listed in this packet on page 22.
- **Entries must be postmarked by March 5, 2010.** Contest entries will not be returned and become property of the contest sponsor.
- Judging Criteria – Theme and Application: 60%; Originality: 30%; Presentation and Accuracy: 10%
- A semi-finalist will be chosen from each CESA District.
- A panel of judges from the Department of Natural Resources will review the 12 semi-finalists and select the three state winners.

Contest Prizes and Recognition:

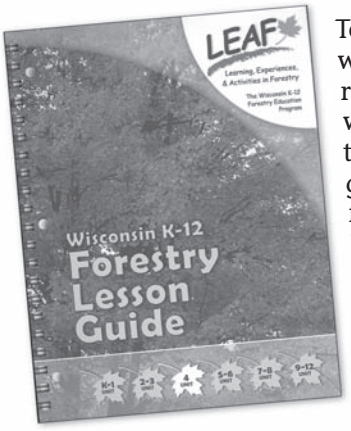
- The three state winners and their teachers will be recognized for their achievement. The first, second and third place students will be presented with a savings bond of $100, $75 and $50, respectively. The Wisconsin Woodland Owners Association donates the awards. The students will also receive a landscape tree to be planted at their school or in their community, donated by the Wisconsin Nursery Association.
- Teachers of the three state winners will receive scholarships for a LEAF workshop and a Project Learning Tree (PLT) workshop, plus additional classroom supplies.
- Parents, students and teachers will be honored at a special celebration in our State Capitol.
- Writings of the three state winners and nine semi-finalists will be featured in the 2011 Arbor Day-Earth Day Calendar and on the WDNR website *EEK!* – Environmental Education for Kids.

Teachers: On the next few pages you'll find activities and additional information that may assist you with this year's contest. Have fun and enjoy!

Celebrate Our Tree and Forest Resources

Earth Day – Thursday – April 22
Arbor Day – Friday – April 30
Forest Appreciation and Stewardship Week – April 25-May 1

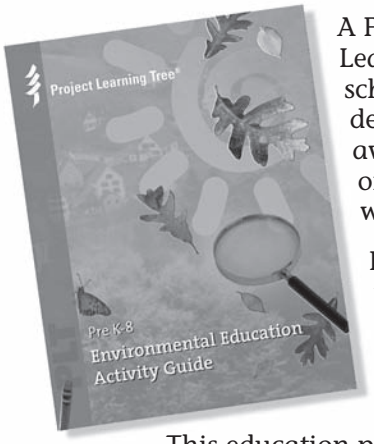
Teachers Win Too!



Teachers of the three state writing contest winners receive a FREE LEAF workshop. In addition, teachers can earn one graduate level credit from the University of Wisconsin-Stevens Point at no cost for attending the workshop (over $300 value). LEAF workshops are held throughout the year in many locations around the state.

Workshop participants are introduced to Wisconsin forest-related concepts, teaching techniques and classroom/field materials. Everyone goes home with a LEAF Lesson Guide designated to fit smoothly into their curriculum. The comprehensive Lesson Guide is correlated with Wisconsin's Model Academic Standards and features interdisciplinary classroom lessons, forestry career spotlights and field enhancements for outdoor learning.

The "Forests are Important to You and Me" activity in this booklet is modified from the 4th grade unit of the LEAF Lesson Guide.



A FREE Wisconsin Project Learning Tree (PLT) scholarship for professional development will be awarded to the teachers of the three 4th grade writing contest winners.

PLT is an award winning environmental education program for educators and students in Pre-kindergarten through 12th grade. This education program has been used in Wisconsin and nationally for over 30 years and teaches students how to think, not what to think, about the environment. Students learn environmental content that correlates to national and state standards in science, social studies, language arts, math and other subjects – and strengthen their critical thinking, team building and problem solving skills.

Project Learning Tree is correlated to the Wisconsin Model Academic Standards and each workshop includes Wisconsin based resources to use in your classroom.

The "Trees for Many Reasons" activity in this booklet is a sample of the variety of lessons offered in the Project Learning Tree PreK-8 Environmental Education Activity Guide.

Stay Connected

FREE Resources for Teachers and Classrooms

Learn about the latest in environmental education by visiting ***EEK!* (Environmental Education for Kids) Teacher Pages** at http://www.dnr.wi.gov/eek/teacher/. Each month, the education calendar alerts teachers to professional development workshops, grant opportunities and the latest natural resource developments. Teacher materials are available for download in the subject areas of language arts, math, science and social studies. Links to multimedia resources and reference materials are also available to enhance your classroom activities. Looking for a student action project? The *EEK!* Teacher Pages will help you discover how to adopt a bald eagle nest, conduct milkweed monitoring or become a Green & Healthy School. Take a look!

Free resources are available to order through the **DNR's Education Connection**. The resources are arranged by topic and include materials such as lesson guides, activity books, videos, posters and much more. Order a little or a lot! A hard copy can be downloaded at http://dnr.wi.gov/education/PDF/EducationConnection.pdf. You can also browse by topic and order online at http://www.dnr.wi.gov/education/.

Tree Planting for Climate Change

The Wisconsin DNR has teamed up with Polar Bears International, a non-profit organization, for a 10-year project to encourage Wisconsinites to plant and care for trees on their land and in their communities. Though it might not seem obvious at first, planting trees in Wisconsin helps conserve polar bear habitat in the arctic. Learn more about this partnership, as well as how you can incorporate tree planting for climate change into your curriculum, by visiting http://www.dnr.wi.gov/forestry/PolarBear/

First Place 2009 – Theme: "My Favorite Tree"

The Oak Tree

by Paul Boesl

Some people like the trees for their yummy fruits. Others like trees that give shelter to wild animals and some like trees for the things they can make from the wood. My favorite is the oak tree. It reminds me of my ties to farming, fun and family.

When I run my hands across the rough bark it reminds me of the many rows of barbed wire that surround our pastures. Its green leaves remind me of the alfalfa fields in the summer.

I have an oak tree in my front yard. I remember fun times in the summer in the cool shade. I would eat popsicles under the oak tree with my mom and sisters. I also had hard boiled egg picnics with my cousin Cooper and sister Anna. We would throw the yolks at the tree because we didn't like them.

Another reason I like the oak tree is because my grandpa, Uncle Paul and my cousin's baby are buried under a strong oak tree. It makes me feel as if they are protected by the tree.

One tree can remind a person of many things. The oak reminds me of farming, fun and family.

School: Prairie Farm Elementary, Prairie Farm
Teacher: Mrs. Sandy Hoffman

Step-By-Step Guide to Raising Oak Trees from Seed

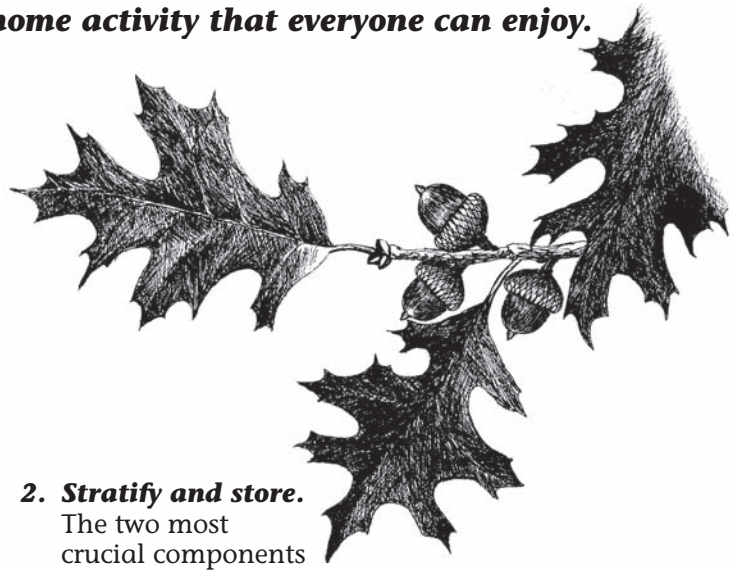
A nature-oriented classroom or take-home activity that everyone can enjoy.

Throughout Wisconsin's history, oak trees have provided shelter, enjoyment and food to humans and wildlife species. Growing oak trees from seed is a practical and fun way to learn about seedling germination and the life cycle of a tree. Oaks, either from the white oak or the red oak group, grow readily and relatively quickly from acorns. Though you could plant acorns outside in the fall and let nature take its course, there is a risk that they'll dry out, freeze, rot or be lost to foraging rodents. Planting them in pots is a more reliable approach. The steps described here also work for other nut trees, such as hickory and walnut.

The genus *Quercus*, to which all oaks belong, contains two major groups in North America: the white oaks and the red oaks. Acorns in the white oak group take one year to mature, while red oak acorns mature in two years. Species in the white oak group include bur, chinkapin, swamp white and white oaks. Species in the red oak group include black, northern pin and red oaks. A field guide will help you identify individual trees.

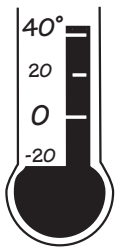
1. ***Collect acorns.*** The best way to obtain good-quality acorns is to collect them in mid-fall from healthy, vigorous trees. You will know when acorns are ready to be harvested when they begin falling from the tree. Gather acorns from tree branches or the ground. Lawns or paved areas make great collection sites because acorns are easy to spot and harvest. Be sure to identify the trees you collect from so you know what species you are growing.

   To determine if an acorn is ripe, simply wiggle the cap. If the two separate easily, the acorn is ready. Then inspect your harvest more closely. Healthy acorns look plump and feel relatively heavy for their size. Discard any that are cracked, moldy, hollow, feel light in weight or have small holes. A good way to identify discards is to place the acorns in a bucket of water – those that float are empty and will not produce a seedling. Because acorns lose viability quickly if they dry out, it's a good idea to proceed to the next step right away.



2. ***Stratify and store.*** The two most crucial components in caring for acorns is not allowing them to dry out and not allowing them to heat up. Many, but not all, oaks require cold treatment. For instance, red oak acorns need a period of cold to stimulate germination, while white oak acorns can be planted immediately or refrigerated for later planting. Fulfilling their need for a cool, moist period is easy to do indoors through a process called *stratification*.

   To stratify, place a handful of acorns in a plastic bag. Add an equal volume of moist, well-drained sand, a sand-moss mixture or sawdust. Seal the bag loosely, label it with the species and date, and store it in a refrigerator set at 40˚F. Check acorns periodically to make sure they are just barely damp. After 30 to 90 days have passed, an embryonic root, called a *radicle*, will emerge from the seeds. Once several acorns have sprouted, prepare to plant all of them.



3. ***Plant the acorns.*** Due to the very long taproot produced by oaks, a deep container (more than 8 inches deep) is best for planting. Make sure the pots have drainage holes at the bottom. One option for a homemade pot is to use a cardboard one-quart milk carton with ½-inch holes cut into the base.

Wash pots well and fill them to within an inch of the top with moistened commercial potting mix or a mix of equal parts loam, sand and peat. The potting soil sold at most nurseries is excellent. Place the acorns about an inch below the surface, deeper if the acorn is particularly large. Plant one seed in each container and cover with ½-inch of potting mix.

4. ***Care.*** Water the pots immediately after planting, and thereafter whenever the top inch or two of soil is dry. Keep the soil moist but aerated. Oak seedlings can grow well outside in partial shade, however, for indoor growth, full sun is needed. Wherever they are stored, seedlings should be protected from freezing weather, drying winds and curious rodents.

Don't allow an oak seedling's taproot to grow out of the bottom of the container, as this will break the root. If seedlings are grown indoors, place them outside, in a protected area, after the last spring frost so they can become acclimated to the elements. If possible, seedlings should be transplanted as soon as the first leaves open and before extensive root development occurs. Outdoor planting should be done in March, April or May (based on your location in Wisconsin) so seedlings have time to establish themselves before the heat of summer. Even if seedlings will remain in pots for a year, they should be placed outside from spring through fall. Exposure to full sun and wind will produce stronger, hardier growth.

When transplanting your oak seedlings, the planting hole should be twice as wide and deep as the pot and roots. Carefully remove the roots and set in the hole with the *root collar* (the place where the stem meets the root system) at ground level. Fill the hole with soil, firmly tamp and water thoroughly.

5. ***Enrichment.*** Students can use acorns (as well as a variety of other tree seeds) to learn skills such as comparisons, measurements of size and weight, and observations of color, texture and smell. They may enjoy raising oak seedlings to plant at home, or to sell and raise funds for outdoor school forest supplies, classroom activities or community service projects.

Helpful websites

Dichotomous Tree Identification Key for Students:
http://www.dnr.wi.gov/org/caer/ce/eek/veg/treekey/index.htm

http://www.uwsp.edu/cnr/leaf/Students/tree_id.aspx

Determine when to plant by looking at the typical dates of the last spring frost in your area:
http://www.wisconline.com/almanac/gardening/springfrost.html

Proper Tree Planting:
www.uwsp.edu/cnr/leaf/PowerPoints/TreePlanting.ppt

http://dnr.wi.gov/forestry/publications/newtreeplanting.pdf

Why Plant Trees?

Why plant trees? For magic and for mystery!
Why plant trees? For health and wealth and history!
Look around you and the living past is near
Rustling voices we can almost hear
The planters of the seed who long-since disappeared
Did they ask, like me…?
Why plant trees? For magic and for mystery!
Why plant trees? For health and wealth and history!
The crunchy nut, the flavorful fruit, the oxygen
Wood renewable for everyone
Sustenance and riches in the golden Sun
Far and wide you'll see…
Why plant trees? For magic and for mystery!
Why plant trees? For health and wealth and history!
A recipe for enchantment
Climb and dream, swing and sway
Medicine, power and wonder
How do they do what they do everyday?
Do they sense our presence when we gather 'round?
Is there meaning in their whispering sound?
Are they telling us a secret so profound?
It's beyond our reach?
Why plant trees? For magic and for mystery!
Why plant trees? For health and wealth and history!

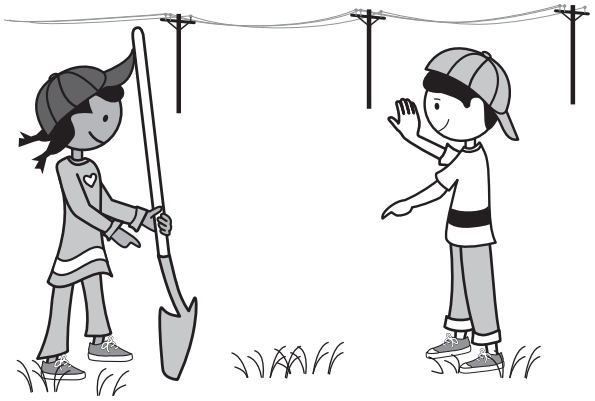
Why Plant Trees? *was written by songster Ken Lonnquist and inspired by 4th grade students from Weyauwega Elementary. The song debuted at the 2009 Arbor Day State Capitol BIG Tree Planting Ceremony.*

Get full song lyrics and check out the music video for Why Plant Trees? at:
http://dnr.wi.gov/forestry/uf/awareness/arborwriting.htm

How to Plant a Tree Seedling

Directions

Copy the following two pages back-to-back and give one to each student. Have them cut out the six panels and study the images on the front, along with the accompanying text on the back. Based on what they read, students should place the panels in order to reflect the steps you take to properly plant a tree. Once the students are finished, they can color and staple or bind their tree planting booklet for future use when they plant their own tree seedlings. Answers on page 22.



Add soil to fill in around the tree. When the hole is about ¾ filled, straighten and level the tree. Gently tamp the soil with the toe of your shoe to remove extra air pockets. Then be sure to give your tree a good soaking of water.

Continue to care for your tree by watering when needed. You may want to place mulch (wood chips, rotting tree leaves or pine needles) around the base of your tree to help hold in moisture. Just be sure the mulch doesn't touch the tree's trunk. Also, be sure to protect your seedling from damage caused by feet, lawnmowers and pets.

Enjoy your tree!

- Watch how the trunk, bark, branches and leaves change as the tree grows.
- Visit your tree during each season and draw a picture of what it looks like.
- Collect fallen leaves or needles for craft projects.
- Observe animals and insects that use your tree for food or shelter.
- Write a poem about your tree and share it with family and friends.

Dig a hole as deep as the root system and twice as wide. Do not dig too deep. Once the plant is placed in the hole, the *root collar* (the place where the stem meets the root system) should be level with the surface of the ground.

Shape a small mound of soil in the center of the planting hole. Spread the tree roots evenly over the mound of soil without bending or breaking them. The roots are like the tree's blood vessels, and they will not work if they are twisted, bent or broken.

Plant tree seedlings in early spring or late fall so they have time to settle in the ground before the heat of summer or frozen temperatures of winter. Choose a planting site with enough room for roots and branches to stretch out and reach their full size. Don't forget to look up, down and all around! Pay attention to utility wires, both above and below ground, as well as buildings, sidewalks and other trees.

The History of Arbor Day

All over the world, people are planting trees in their yards and in their communities, caring for them and learning about their value. Here in the United States, we call this tree planting festival Arbor Day. In other lands, you may hear it called Arbor Week, Tree Holiday or Tree Festival. In Japan, it is called Greening Week. In Israel it is called the New Year's Day of the Trees. Iceland has a Student's Afforestation Day. This means "to change open land into forest." Whatever people call this special time of year, they are sharing the news that trees are important to us all, wherever we live.

The idea for Arbor Day came from a man named Julius Sterling Morton from Nebraska City, Nebraska. Morton and his wife, Caroline, were among the pioneers moving into the Nebraska Territory in 1854. Having lived in Detroit where they were surrounded by trees, they grew up being lovers of nature.

Morton was the editor of Nebraska's first newspaper. With writing at his fingertips, he used the paper to share his enthusiasm for trees. Morton promoted tree planting and care, as well as environmental stewardship (taking care of the Earth) and how all of life is interrelated. Through the newspaper and his speeches, he encouraged everyone to set aside a specific day to plant trees.

In 1872, the Nebraska State Board of Agriculture accepted a resolution by him "to set aside one day to plant trees, both forest and fruit." With this first tree planting holiday celebration, J. Sterling Morton became known as the Father of Arbor Day. Today, Arbor Day is celebrated in all 50 states and around the world. In Wisconsin, Arbor Day is celebrated on the last Friday in April.

Used with permission from the EEK! website – www.dnr.wi.gov/eek/

Directions:

1. Use the essay above to help you answer the questions in Section A. Write the answers in the squares.
2. Use the answers from Section A to match the letters and numbers in Section B.
3. To help you get started, some of the letters have already been given.

Section A

1. The name of the tree-planting celebration in Japan.

6	2	10	10	7	23	7	6	9	10	10	24

2. The city where J. Sterling Morton began to promote tree planting.

N											
7	10	18	2	22	25	24	22	5	23	8	4

3. J. Sterling Morton's profession.

			T		
10	14	23	8	20	2

4. Taking care of the Earth.

25	8	10	9	22	2	14	25	12	23	15

5. The month when Arbor Day is celebrated in Wisconsin.

	P			
22	15	2	23	13

Section B

Use the answers from Section A to fill in the letters below to answer the following question:

What wonderful things do trees give us?

	X				
20	17	4	6	10	7

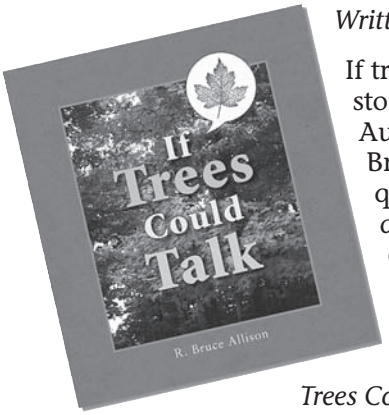
25	12	22	14	10

			U		
18	10	22	16	8	4

Answers on page 22.

Resources for Teachers

If Trees Could Talk: Stories about Wisconsin Trees



Written by R. Bruce Allison

If trees could talk, what stories would they tell? Author and arborist R. Bruce Allison tackles this question in an engaging, accessible format in this children's companion to his 2005 adult title, *Every Root an Anchor*.

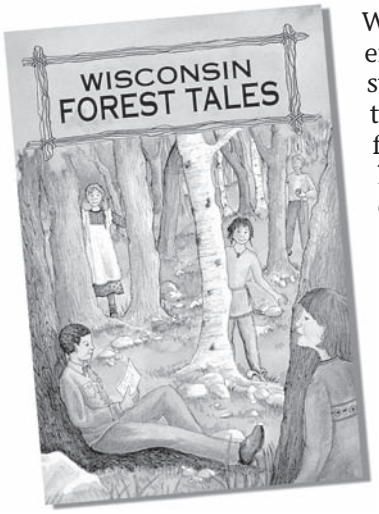
Inside the pages of *If Trees Could Talk*, Allison gives readers aged 7-12 fascinating stories that introduce them to noteworthy trees, both past and present, across Wisconsin. From Kenosha's buried forest on the shores of Lake Michigan to the Wyalusing maple that saw the last of the passenger pigeons; from Aldo Leopold's "good oak" to the disappeared elms of State Street in Madison, these stories open up a fascinating ecological and social history of Wisconsin to young readers. Other stories showcase the state's history: Readers will encounter Chief Black Hawk hiding in a hickory, Civil War soldiers enlisting for battle under "sign-up" trees, and trees used to hang criminals without a trial. They will also learn of large and unusual trees like the Columbus Cottonwood, which was over 26 feet around or, in the words of the author, so large that "it would take you and eight of your friends with arms outstretched to reach all the way around it!"

Told in compelling narrative style and supplemented with historic photographs and illustrations, these stories instill a sense of place and understanding of the rich heritage of our trees and forests. The book also carries an environmental message encouraging children to appreciate and manage natural resources wisely and respectfully. The highly accessible format includes a map of historic trees' locations, a glossary of tree terms, a tree identification chart, and a list of suggested books and websites for further reading.

Paperback: $15.95
80 pages, 80 b/w photos and illustrations
ISBN: 978-0-87020-419-7
To order: www.wisconsinhistory.org

As part of the 2010 Forest Appreciation Week Writing Contest, the first 100 participating teachers will receive a free copy of the book "If Trees Could Talk"!

Wisconsin Forest Tales



Would you like a fun and engaging way for your students to learn about the history of Wisconsin's forests? *Wisconsin Forest Tales*, a collection of eight historical fiction stories, is a useful tool to help teach Wisconsin history and boost reading skills. It was written in 2004 by local author Julia Pferdenhirt with funding from the Wisconsin Environmental Education Board, the Wisconsin Department of Natural Resources and the LEAF program.

An electronic copy of the book, along with reader's theater scripts and an activity guide, are available online at: http://wisconsinforestry.org/webtemplate.php?linkname=wiforesttales

Three sets (25 copies each) of the books are also available for checkout from the Wisconsin Center for Environmental Education Resources Library at UW-Stevens Point. Contact them at (715)346-4854 or online at: www.uwsp.edu/cnr/wcee/library/index.htm

Teachers with access to school or public libraries in the Wisconsin Library Delivery System Network (http://psw.scls.lib.wi.us/delivery/networks/networks.html) can borrow these books up to four weeks.

Wisconsin Center for Environmental Education (WCEE) Resources Library

The WCEE maintains an Environmental Education (EE) Resources Library for use by educators in Wisconsin. It is located on the UW-Stevens Point campus in Stevens Point, WI.

The library houses EE materials including:

- Curriculum and activity guides
- Children's books
- Reference books
- Multimedia – DVD, CD, VHS, cassette
- Demonstration materials, games, puppets, posters and more

Materials can be checked out on-site or via the web. For more information visit the WCEE webpage: www.uwsp.edu/cnr/wcee/library/index.htm

Trees for Many Reasons

By reading fables such as *The Lorax* by Dr. Seuss or *The Man Who Planted Trees* by Jean Giono, students can examine the importance of conserving natural resources.

Activity
89

Levels
Part A: Grades 2-8
Part B: Grades 6-8
Variation: Grades 4-6

Subjects
Science, Social Studies, Language Arts

Concepts
- Our increasing knowledge of the Earth's ecosystems influences strategies used for forest management and environmental stewardship. (5.5)
- Increased public knowledge of the environment and the need for conservation of natural resources have resulted in lifestyle changes in many cultures. (5.12)

Skills
Discussing, Forming Concepts, Evaluating, Comparing and Contrasting, Identifying Main Ideas

Graphic Organizer Software

Materials
One copy of *The Lorax* by Dr. Seuss and *The Man Who Planted Trees* by Jean Giono

Time Considerations
Preparation: 15 minutes
Activity: 50-minute period for each book

Related Activities
Tale of the Sun, Life on the Edge, We All Need Trees, Three Cheers for Trees

OBJECTIVES

- Students will discuss and analyze fictional stories related to natural resources.
- Students will determine whether the main ideas of the stories build a case for the conservation and wise use of natural resources.

ASSESSMENT OPPORTUNITIES

- Students' answers to the questions at the end of each story can be used to assess students' understanding of the environmental messages contained in the stories.
- Ask students to create a graphic organizer showing the main ideas presented in the two stories.

BACKGROUND

A quick look around the home or school reveals how many items are made from wood and other forest resources. Trees are important to us whether they are used for products or left in their natural environment where they provide oxygen, soil protection, beauty, and a habitat for plants and animals.

Humans have always depended on trees for firewood, shelters, tools, paper, and many other needs. In many parts of the world, trees are removed from forested areas without being adequately replanted. This process of deforestation can have severe environmental consequences on a regional and a global scale.

GETTING READY

Obtain a copy of *The Lorax* or *The Man Who Planted Trees* to read aloud to your students. Videos of both stories are also available. For the Variation in Part A, write each question on an index card. Do the same for the questions in Part B.

DOING THE ACTIVITY

PART A—The Lorax

1. Read *The Lorax* aloud or watch the video.

2. Ask students to list what they think the major ideas of the story are.

3. Have them think about and answer the following questions:
- Why do you think the Once-ler did what he did?
- What patterns of change in the environment did we observe?
- What were environmental conditions like before the company started making Thneeds? What were they like afterward?
- What was the author's message concerning what one person can do to save or destroy the environment?

Variation

1. Ask students to name things from nature (natural resources) that they use to live. Examples include trees, water, air, minerals, and so on. Read *The Lorax* aloud or watch the video.

2. Divide the class into six groups. Give each group a card with one of the sets of questions written on it. Each group should discuss the questions, write down the answers, and be prepared to read them to the entire group.
- How could the Once-ler have managed his company to protect natural resources and not run out of trees to manufacture "Thneeds"? Is it necessary to protect all trees "from axes that hack"?
- What did the Once-ler mean by "UNLESS"? What responsibility does he seem to think "someone like you" needs to take? What kinds of things can we do today to ensure that trees will be available for all different purposes in the future?

- Compare the Once-ler's attitude toward the environment at the beginning of the story with his attitude at the end.
- The Once-ler explains his actions by saying, "If I didn't do it, someone else would." Is this a good excuse for doing what he did?
- The Lorax says he speaks for the trees. What does this mean to you? What is the Lorax's attitude at the end of the story?
- What seems to be Dr. Seuss's purpose in writing this fable? (A fable is a fictional story that teaches a lesson.)

3. After groups have had time for discussion, have each group read their questions and answers to the class. Students can agree, disagree, or add to the answers given by their classmates.

PART B—The Man Who Planted Trees

1. Read the story aloud, or watch the video. Ask students to list what they think the major ideas of the story are. After listing their ideas on the board, discuss the following questions with the entire group:

- Why do you think Elzeard did what he did?
- What changes did the narrator notice between his visits?
- What were the environmental conditions like before Elzeard planted the trees? What were they like afterward?
- What was the author's message about the difference one person can make?

2. Divide the class into six groups. Give each group an index card with one of the following six statements on it. Each group should decide if students agree or disagree with the statement.

If they agree, they should give three reasons why, and then give an example from real life of how this statement is true. If they disagree, they should state why and modify it into a statement with which they agree.

- The balance of nature is important to all life on Earth and can easily be destroyed.
- Humans cannot place themselves apart from nature in making decisions about natural resources.
- Actions taken without thought or planning can have disastrous consequences.
- Natural resources are not limitless and can be used up if they are not managed carefully for the long run.
- Each person has a responsibility to help conserve resources and protect the environment.
- Consumers should demand that manufacturers produce products in an environmentally sound manner.

3. After students have had time for discussion, have each group read its statement and then present the results of its discussion. The group leading the discussion should encourage classmates to say whether they agree, disagree, or have ideas to add.

Enrichment

- Either alone or in small groups, students can write and illustrate a sequel to *The Lorax*. The sequel might explain how the Truffula tree made a comeback through replanting and proper care. The sequel could say what the new managers of the Truffula Tree Company are going to do to maintain environmental quality and at the same time make Thneeds.

- After the sequels are finished, ask older students to consider the following questions:
  - Does either the original Lorax story or your sequel accurately portray industry?
  - Which version, the original or your sequel, appears to best describe people's attitudes in the region you live?
  - What social and economic implications will the actions suggested in your sequel have for ensuring a quality environment? For example, who will pay for the environmental protection?
  - Who will pay for the damage to the environment if these actions prove unsuccessful?
  - Who will provide Thneeds if the Truffula Tree Company doesn't?

- Have students prepare a sequence for the key events in *The Lorax*. Then, have them draw a diagram or flow chart showing the connections between characters in the story (Swomee-Swans, Bar-ba-loots, Lorax) and the natural resources (Truffula trees, clean air, clean water).

READING CONNECTIONS

Carson, Rachel. *A Sense of Wonder.* Perennial Library. 1984. Filled with words and pictures to help keep alive the sense of wonder and delight in mysteries of earth, sea, and sky. Grades 6+. ISBN: 006757520X.

Geisel, Theodor (Dr. Seuss). *The Lorax*. Random House. 1971. In this classic story, the Once-ler describes how his greedy actions destroyed a beautiful and thriving environment. Children will enjoy the colorful characters and rhyming verse. Also available in Spanish. Grades PreK-6. ISBN: 0394823370.

Giono, Jean. *The Man Who Planted Trees.* Chelsea Green Publishing Co. 1985. Jean Giono's beautiful allegorical tale is legendary. Written in the 1950's, its message was ahead of its time, inspiring readers to rediscover the harmonies of the countryside and prevent its willful destruction. Grades 4+. ISBN: 1570625387.

Leopold, Aldo. *A Sand County Almanac.* Oxford University Press, 1989. A Sand County Almanac combines some of the finest nature writing since Thoreau with an outspoken and highly ethical regard for America's relationship to the land. Grades 6+. ISBN: 019505928X.

McClure, Michael Robert. *Acorn Alone.* A.R.E. Press, 1994. A story of dramatic effects of deforestation and how the Earth reclaims and renews itself. Grades PreK-2. ISBN: 0876043260.

Van Allsburg, Chris. *Just a Dream.* Houghton Mifflin. 1990. When he has a dream about a future Earth devastated by pollution, Walter begins to understand the importance of taking care of the environment. Grades 1-5. ISBN: 0395533082.

Available @ http://shop.plt.org

Trees for Many Reasons: Correlations to Wisconsin Model Academic Standards

Students will: 1) Discuss and analyze fictional stories relating to the proper and improper use of natural resources; 2) Identify ways to take positive environmental action. English Language Arts, Science, Social Studies, Environmental Education. ***ELA:*** *C.4.2* ***S:*** *F.4.4* ***SS:*** *A.4.4, D.4.7* ***EE:*** *D.4.3*

LEAF is a partnership program between
Wisconsin Department of Natural Resources - Division of Forestry
and
Wisconsin Center for Environmental Education
College of Natural Resources
University of Wisconsin-Stevens Point.

Forests Are Important to You and Me

This lesson is modified from the LEAF Unit 4 Guide, Lesson 6. Discover more about LEAF at www.leafprogram.org

Nutshell

In this lesson, students discover reasons why Wisconsin forests are important to our quality of life. After participating in a guided imagery, students brainstorm ways that forests are vital to our existence. As a conclusion, they draw a picture depicting ways that Wisconsin's forests are important to them, share this with the class and create an "Important Forest" on the classroom wall.

Big Ideas

- Humans value forests for their aesthetic, cultural, ecological, economic, educational and recreational benefits.
- Forests impact air and water quality, prevent soil erosion and provide habitat for wildlife.
- Humans depend on forests for products and services that they use every day.
- Choices humans make today directly affect our ability to sustain forest ecosystems essential to meeting future needs.

Objectives

Upon completion of this lesson, students will be able to:

- Discuss the importance of forests to our economy, environment and social well-being.
- Describe the ecological roles of forests.
- Identify that humans depend on forests for products and services.

Subject Areas

Language Arts, Science, Social Studies

Lesson/activity Time

- Total Lesson Time: 60 minutes
- Time Breakdown:

  Introduction . . . . . 5 minutes

  Activity 1 . . . . . 20 minutes

  Conclusion . . . . . 35 minutes

Teaching Site

Classroom

Background

Wisconsin is fortunate to have the forests that it has. With nearly half of the state covered in forests, they are not only a plentiful resource, but also an extremely important resource. Our forests contribute greatly to the quality of life we all enjoy by playing key roles in our ecologic, economic and social well-being.

- Forests provide a variety of important ecological functions, including habitat for wildlife, removing carbon dioxide, producing oxygen, cooling the air, cycling matter and reducing erosion of soil into our lakes, streams and rivers.
- The **economy** of Wisconsin is highly dependent on our forests. Approximately one in five people employed in Wisconsin works for a forest-related industry, which includes the manufacture of products from forest materials.
- Forest recreation and related **tourism** provide the state a major economic boost. They provide important social outlets for relaxation and stress reduction.

- **Urban forests** (made up of the trees in an urban area) provide these same values, plus reduce noise, block winds and provide a relaxed setting for human life.

The way we manage our forests has changed drastically as the need for balancing ecologic, economic and social needs has emerged. Although, as individuals, each of us may place different levels of value on each of these needs, all are necessary to maintain our quality of life. Today we manage forests to provide for many needs – now and for the future. This type of management is referred to as **sustainable management**.

Vocabulary

Economy: The prosperity of an area based on the trading of money for products and services.

Environment: The air, water, soil and organisms that surround and affect us.

Sustainable Management: Maintenance of forests to meet current and future ecological, economic and social needs.

Tourism: An industry that makes money by providing services to people who come to an area for vacation.

Urban Forest: The trees and associated living organisms in an urban area.

Materials List

For Each Student

- Piece of paper
- Markers or crayons

For The Teacher

- Copy of Teacher Pages **1A-C**, *Doctor Treebody Script*
- Doctor Treebody costume (suggested items include big glasses, a suit coat, tie)

For The Class

- Chalk/marker board

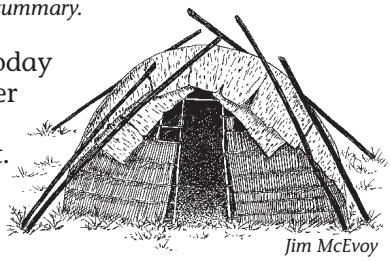
Teacher Preparation

Familiarize yourself with Teacher Pages **1A-C**, *Doctor Treebody Script*.

Procedure

Introduction

Note: Teachers may need to modify the introduction depending on students' knowledge of Wisconsin history. If students have not yet learned about the history of Wisconsin's forests, the teacher may need to present this information as a summary.



Jim McEvoy

Tell your students that today they are going to discover why Wisconsin's forests are extremely important. Ask them to think about how forests were important to people who lived in Wisconsin in the past. Ask them how forests were important to the Ojibwa villages. *(Forests provided all of their basic needs including food, materials for shelter and materials for transportation [canoes].)* Remind your students of the European settlers who came to Wisconsin and again ask them how forests were important to these early settlers. *(Forests provided materials to build their homes, fuel to heat their homes, food, jobs and money for a new economy.)* Ask your students to recount what happened to Wisconsin's forests from early settlement until today. *(Forests were cut down for lumber, the land was sold to farmers, farmers couldn't make it in many areas and we eventually replanted the forests.)* Tell your students that Wisconsin's forests have indeed gone through many changes since the first Europeans arrived in Wisconsin. Throughout this time, forests were an important part of Wisconsin, even after the forests were gone. Tell students that you have a special guest who is going to talk to them about why Wisconsin's forests are so important today.

Activity 1

1. To get into the spirit of things, turn around and put on the costume items you have brought to transform you into Doctor Treebody. Turn around and begin reading Teacher Pages **1A-C**, *Doctor Treebody Script*, to the students. The story describes what the students should do as you read the script aloud. If you do not dress up, you may instead tell students that you have a letter from Doctor Treebody. Have fun with this.
2. At the end of the script, turn around again, remove your costume items and once again become the teacher. Tell your students that they are going to participate in something called a brainstorm. Describe to the students that brainstorming is the gathering of everyone's ideas about a particular topic. As they come up with ideas, you will write them on the board. One person's idea often helps someone else come up with an even better one. Because of that, no idea is silly or wrong, it just helps contribute to all of the ideas.
3. Write on the board, "Why are Wisconsin's forests important?" Ask students to raise their hands and tell you why they think Wisconsin's forests are important. Tell them that they may use ideas from Doctor Treebody's talk or ideas that they have. As they give you their ideas, write them on the board.
4. Once you have created a list of ideas, tell students that each of these contribute to our well-being. Ask students if they can think of a way to categorize these items. You may need to help them, so remind them that forests are important for:
   - the environment or their ecological importance
   - the economy (products, jobs, tourism)
   - things like recreation, which we will refer to as social

   Write **"Environment," "Economy,"** and **"Social"** on the board.
5. Go through the list the students generated and ask them to share which category they think each item fits under. Some items may fit under more than one category, others may not be apparent. These might be things that just plain make life easier. For, now, place these example items under "Social".
6. Ask students if one of these categories is more important to them than another. Their answers will vary. Ask them to explain why. Tell them that their examples show that we all value the forest for different things. Tell them that each of these areas of importance (ecological, economic and social) contribute to our well-being, something we call our quality of life. In other words, forests determine how well we live.

Conclusion

Give each student a piece of paper. Ask students to draw a picture of a Wisconsin forest. In the picture, ask them to depict as many ways as they can that forests are important. Each of the three categories discussed earlier – ecology/environment, economy and social well-being – should be represented at least once. When students have finished their drawings, have each one share their images with the class. When you have concluded this sharing, collect the drawings and display them on the wall. Add a title above them that says, "Wisconsin Forests Are Important Because…"

Standards

Language Arts C.4.2

Oral Language
Standard is: *Listen to and comprehend oral communications – recall content of stories after hearing them, relate the content of prior knowledge and answer various questions about the story.*

Environmental Education B.4.10

Natural Resources and Environmental Quality
Standard is: *List jobs in the community that result from or are influenced by processing and using natural resources.*

Visual Arts A.4.1

Visual Memory and Knowledge
Standard is: *Develop a basic mental storehouse of images.*

Visual Arts E.4.4

Visual Communication and Expression
Standard is: *Communicate basic ideas by producing visual communication forms useful in everyday life, such as sketches, diagrams, graphs, plans and models.*

Doctor Treebody Script

Hi!

I'm Dr. Treebody, and I've got a story to tell you about why Wisconsin's forests are important. How important are they? Glad you asked. Why, they are so important that without them we wouldn't have habitat for wildlife, lumber for our homes, cool places to hike, or jobs for many people. They produce the oxygen we breath and, oh yeah, did I mention toilet paper?

I've just spent the last year traveling through your forests. You see, that's what I do. I work for the Forest Importance Institute. The Institute studies the forests of the world, documents why they are important, and helps citizens understand how lucky they are to have forests.

Your teacher invited me to share a new virtual reality technology with you so you can see the cool things that Wisconsin's forests do for you. The machine is called the Brainwave 4000. How the "4000" works is that you have to close your eyes and listen to words that are read. As you listen, I would like you to turn on the Brainwave 4000 in your head. The backs of your eyelids are like a big stereo movie screen. As I talk to you, you will see the pictures you already have in your head. Sounds funny, but your head is full of pictures. Pictures you've seen in magazines, on television, or from real life experiences. So put a new battery in, turn on your Brainwave 4000, and sit back and watch the show.

All right, got your "Brainwaves" on? Here we go.

Climb up here with me and stand on these big rocks on this cliff. Look at that big valley. Hey, be careful. Don't lean too far over; you just might fall off. Look at the tops of those trees. They seem to go on forever. Did you see that large hawk land on that tree? Let's walk down into the woods. If you blink your right eye twice, the Brainwave 4000 will take us directly into the forest.

Did everyone blink your right eye twice?

We're in a Wisconsin forest. Look at the trees – oaks, maples, and pines. Anyone see more than trees? I've seen white-tail deer, black bears, and wild turkeys here before, and small animals like chipmunks, chickadees, and blue spotted salamanders. This forest is great wildlife habitat. It provides everything they need to live.

Doctor Treebody Script

Hey, did you know that forests provide things we need to live too? Take a look at this tree leaf I have in my hand. This leaf is a factory. No, it doesn't make cars or light bulbs, but it makes something we need even more. As the sun shines on the leaf, a process inside the leaf called photosynthesis takes place. The leaf takes in carbon dioxide, which is a gas all animals breathe out, and gives off oxygen, which is a gas we all need to live.

Everyone take a deep breath. Wow, that was made by a tree.

The leaves on this tree do other things too. Feel how cool it is under this tree compared to out there in the sun. The shade of this tree is like an air conditioner. Oh, it's starting to rain. We seem to be under a big umbrella. It is raining hard now. The leaves slow down the rain and the water drips off the leaves. It lands on last year's leaves on the ground under the tree. Amazing how hard it is raining and yet this year's leaves and last year's help keep the rain from washing away the soil under the tree.

Seems this forest does a lot to help our environment. This is pretty important stuff, don't you think? But that's just part of the reason forests are important. Not only are they important to the environment, they also are important to our economy.

I know that's a big word you might not know. Let's look at forests and how they relate to the economy. Pull on your left ear to reset the Brainwave 4000 and watch closely. I bet you'll figure out what we mean by economy.

Did you pull your left ear?

Hey, how many of you use products that come from forests? There are about 5,000 things that come from trees alone. We don't have time to look at all of these, but let's look at a few. The first thing that probably comes to mind is lumber. How many of you live in a house or apartment? Blink your right eye three times and the Brainwave 4000 should take you to your home. What is it built from? Although you may not be able to see it on the outside, lumber is a key part of your house – from the walls and doors to the roof.

Lumber is just one thing that comes from forests, we only have 4,999 more to go. Let's go in your bathroom. Sure, you've got toilet paper, but that's not all. Let's take a peek in your medicine cabinet. I see four things made from forests right here. Do you see them? You've got mouthwash, toothpaste, shampoo, and shaving cream. These items are made from the sap of trees or from fibers found in the cell walls of trees.

I'm kind of hungry. Let's check out your kitchen. Look in your freezer. There's a box of double fudge nut ice cream. I love ice cream and, believe it or not, ice cream too, has fibers from the cell walls of trees. You've got apples, pears, peaches, and plums – these all come from trees. Hey, mind if I snoop a little more in your cupboards?

Doctor Treebody Script

Wow, look here – napkins, paper plates, and a cutting board. These are all made from trees right here in Wisconsin. Do you get the picture, or do I need to show you the other 4,985 things? Looks like Wisconsin's forests are really important for products. Making those products means jobs.

Speaking of jobs, does anyone have family that works in the forest products industry? Wiggle your nose three times and the Brainwave 4000 will reset. See those people working in the forest products industry? Over there is a logger who harvests the trees. That trucker hauls them to the sawmill. Blink your right eye two times. Wow, that lumber from the sawmill is being unloaded into a factory that makes windows, furniture, toothpicks, or the stuff we found in your kitchen. Stick out your tongue and move it up and down. The Brainwave 4000 turns into a job counting calculator. Stick your thumb up and ask the Brainwave 4000 how many Wisconsin people work in forest product jobs. Look at that! The digital readout says that more than 99,000 people in Wisconsin make their living from forest products. That's nearly one out of every five people who work in Wisconsin. Put your thumb up again. Ask the Brainwave 4000 how much money is paid out to these 99,000 jobs in wages. Amazing, the digital readout says more than $3.6 billion dollars are paid out in wages each year. That's a whole lot of money.

Oh, I forgot something else cool about forests. Touch your left elbow to your right knee. That sets the Brainwave 4000 to vacation time. Anyone ever go on vacation in northern Wisconsin? Look over there; people are camping, fishing, canoeing, and hiking, and it is all taking place in the forest. Forests help what we call tourism. Tourism is the industry related to people taking vacations in our state. Isn't it beautiful and relaxing here in this forest? If you spend much time here you just might end up mountain biking, snowmobiling, riding all-terrain vehicles, hunting, or birdwatching.

I don't know about you, but I think forests in Wisconsin are pretty darn important. I've been all over the world, and not every state and country has forests that provide all the things Wisconsin's forests do. Next time someone asks you about forests, have them turn on their Brainwave 4000 and show them how important forests are. Well, got to go. Put your left hand on top your head and open your eyes. Your Brainwave 4000 is now shut off.

Certificate of Participation

Forest Appreciation Writing Contest

2010 - Why Plant Trees?

Student

Paul DeLong

Chief State Forester
Wisconsin Department of Natural Resources
Division of Forestry

Forest Appreciation Week Writing Contest Entry Form

Each classroom entry must have this form. Submit only one (1) entry per classroom by March 5, 2010. Fill in the blanks below.

Attach this form to your chosen classroom entry and mail it to the judging coordinator:

Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, WI 53707-7921
Attn: Tessa Jilot FR/4

It is important that all information below is complete.

Date _____ **CESA District** _____

Student's Name _____

Student's Address _____

City _____ **Zip** _____ **County** _____

Parent/Guardian Name(s) _____

Teacher's Name _____

School Name _____

School Address _____

City _____ **Zip** _____ **County** _____

Teacher's e-mail address _____

School Phone (_____) _____

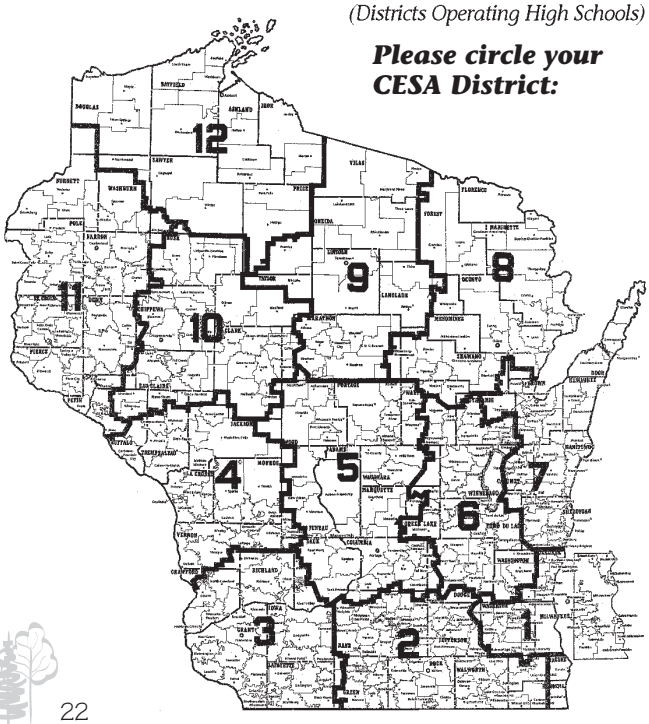
Principal's Name _____

Number of students in your classroom that participated _____

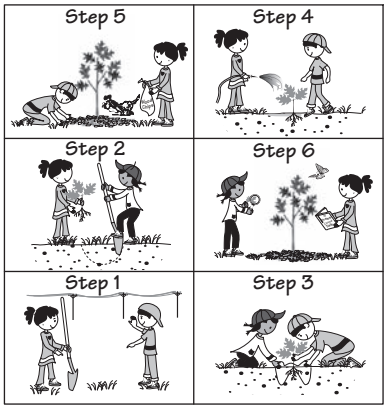
This number helps us determine the overall number of students participating in 2010.

Wisconsin Cooperative Educational Service Agencies
(Districts Operating High Schools)

Please circle your CESA District:



Answers to "How to Plant a Tree Seedling" activity on pages 9-10



Answers to "The History of Arbor Day" activity on page 11

Section A

1. GREENING WEEK
2. NEBRASKA CITY
3. EDITOR
4. STEWARDSHIP
5. APRIL

Section B

OXYGEN
SHADE
BEAUTY

Thinking about distributing Arbor Day tree seedlings this year? If so, below are a few simple tips for the care and distribution of tree seedlings to your students.

A. Prior to distribution of seedlings

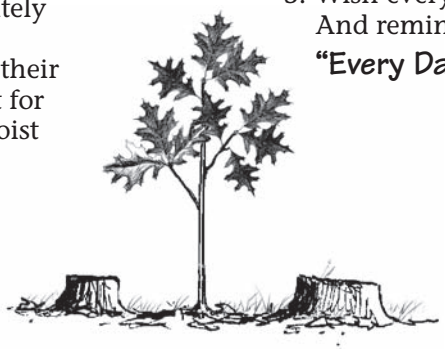
Have each student bring a clear plastic bag about the size of a bread wrapper from home.

B. When your seedling box or bag arrives

1. Keep your trees cool. Refrigerate your seedlings (34-36 degrees Fahrenheit is ideal). Seedlings are perishable and should be refrigerated until planting time. DO NOT FREEZE. Do not store your trees in the sun, in a car trunk, in a heated classroom or other warm place before distributing them to your students.
2. Keep your trees moist. Do not open your sealed bag or box of seedlings. Leaving the bag closed will keep seedlings moist and cool until planting time.

C. At distribution time

1. Package individual seedlings.
   - Wrap the roots of each seedling in paper towels.
   - Dip the wrapped area of the seedling in water and place in the plastic bag.
   - Tie the bag closed above the roots using string, tape or twist ties.
2. Review planting instructions with your students. If children cannot plant their tree the day that they receive it, tell them to place it in the vegetable drawer of their refrigerator until it can be planted. Plant the seedling at approximately the same depth as it grew in the nursery or slightly deeper. Encourage students to plant their seedling as soon as possible. Emphasize that for the seedling to live, its roots must be kept moist until it is planted. Remind students to select a planting site that will give the seedling room to grow and has correct light conditions.
   - Dig a hole as deep as the root system and about 1 foot wide. (Remind children that the majority of a tree's feeder roots are in the upper six inches of the soil where they compete with grass roots for oxygen, moisture and nutrients. Feeder roots thrive on soil that is loose, moist and fertile – conditions often lacking in soils around homes.)
   - Remove the seedling and if used, the paper towel from the bag and place it in the planting hole. Seedling roots should hang freely in the planting hole and not be crooked, crowded, twisted or bent.
   - Crumble soil back around the roots and pack the soil gently after planting.
   - Water your seedling. Water will finish packing the soil around the roots.
   - Mulch your planting area to a depth of 2 inches and a radius of 9-12 inches. Make sure to pull the mulch away from the seedling's trunk to prevent bark rot.
   - Remember to water the seedling weekly during dry periods. New trees need the equivalent of 1 to 1.5 inches of rainfall per week during their first year.
3. Wish everyone tree-mendous success! And remind your students that "Every Day is Arbor Day!"



Applications for 4th Grade Arbor Day Free Tree Program are due March 15, 2010
Applications and tree planting instructions available at
http://dnr.wi.gov/forestry/Nursery/Order/arborday-order.asp

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, WI 53707-7921
Attention: Genny Fannucchi - FR/4

Why Plant Trees?

4th Grade Statewide Writing Contest

Deadline ➜ March 5th, 2010